

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A transmission type photoelectric encoder having a telecentric optical system in which a first lens and an aperture located at a focal position of the first lens are interposed between a main scale and a photoreceptor, and

wherein at least a second lens is interposed between the aperture and the photoreceptor with a focus of the second lens on the aperture, thereby constituting a bilateral telecentric optical system.

2. (Original) The photoelectric encoder according to claim 1, wherein the second lens is made identical to the first lens and is situated reversely.

3-5. (Canceled)

6. (Currently amended) [[The]] A photoelectric encoder according to any of claims 1 to 5, having a telecentric optical system in which a first lens and an aperture located at a focal position of the first lens are interposed between a main scale and a photoreceptor, and wherein one or more second bilateral telecentric optical systems including a second aperture and third and fourth lenses arranged on both sides thereof is/are further interposed between the second lens and the photoreceptor.

7. (Canceled)

8. (New) A photoelectric encoder having a telecentric optical system in which two lenses and an aperture located at a focal position of the two lenses are interposed between a main scale and a photoreceptor, and wherein the two lenses are comprising identical lenses having symmetrical front and back shape with regard to central plane perpendicular to optical axis.

9. (New) The photoelectric encoder according to claim 8, wherein each of the two lenses is made of a ball lens.

10. (New) The photoelectric encoder according to claim 8, wherein each of the two lenses is made of a GRIN lens.

11. (New) The photoelectric encoder according to claim 8, wherein each of the two lenses is made of a drum lens.

12. (New) The photoelectric encoder according to claim 1, wherein the aperture is formed as a slit oblong in a direction perpendicular to an axis of measurement.

13. (New) The photoelectric encoder according to claim 2, wherein the aperture is formed as a slit oblong in a direction perpendicular to an axis of measurement.

14. (New) The photoelectric encoder according to claim 6, wherein the aperture is formed as a slit oblong in a direction perpendicular to an axis of measurement.

15. (New) The photoelectric encoder according to claim 8, wherein the aperture is formed as a slit oblong in a direction perpendicular to an axis of measurement.

16. (New) The photoelectric encoder according to claim 9, wherein the aperture is formed as a slit oblong in a direction perpendicular to an axis of measurement.

17. (New) The photoelectric encoder according to claim 10, wherein the aperture is formed as a slit oblong in a direction perpendicular to an axis of measurement.

18. (New) The photoelectric encoder according to claim 11, wherein the aperture is formed as a slit oblong in a direction perpendicular to an axis of measurement.